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ORNAMENTATION OF SCHOOL
GROUNDS IN LOUISIANA



Class L B 3005

Book L 6
copy 1



FARMERVILLE HIGH SCHOOL BUILDING.
One of the most attractive sites in the State.

ORNAMENTATION OF SCHOOL GROUNDS

copy 2

ORNAMENTATION
OF
SCHOOL GROUNDS
IN
LOUISIANA

ISSUED UNDER DIRECTION OF
T. H. HARRIS, STATE SUPERINTENDENT OF EDUCATION
BATON ROUGE, LA.

PREPARED BY
C. J. BROWN, STATE SUPERVISOR OF RURAL ELEMENTARY
SCHOOLS.



Baton Rouge, La.
RAMIRES-JONES PRINTING CO.
1911

1042

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9/14/2



THE FIRST CONSIDERATION—AMPLE PLAYGROUND SPACE.
(Permission Prof. H. L. Hutt, Guelph, Canada.)



THERE SHOULD BE NO OBSTRUCTIONS ON THE PLAYGROUND.
(Permission Prof. H. L. Hutt, Guelph, Canada.)



PREFACE.

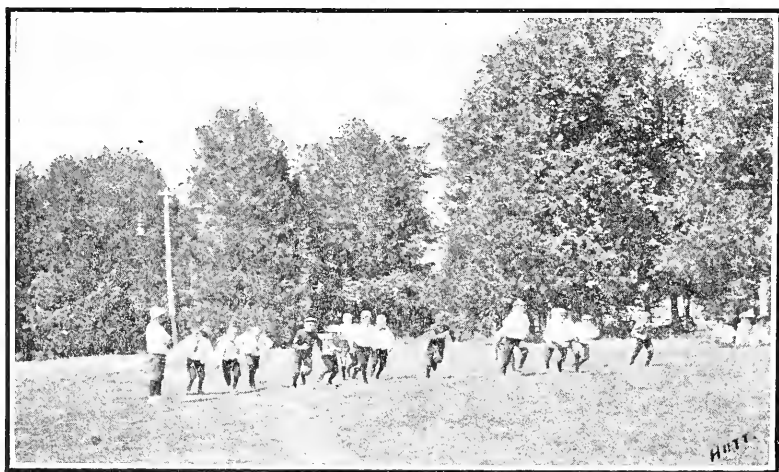
“There is no bit of ground where beauty is more appropriate, where it will extend a wider and more constant blessing, and where it is more easily obtained.

“There are ferns for shady corners; there are many varieties of tall goldenrod that, bending in September breezes, will beckon the children back to school as to a golden way to knowledge; there are quantities of sumac which, put in clumps against the building or the high back fence, will change an ugly barrier into a gorgeous screen; there are vines that ask only for a chance to climb lovingly over the doors and windows; there are little trees only waiting for an opportunity to spread their roots in the school yard and grow great there, entering tirelessly into the games of a ceaseless procession of scampering children, receiving into their arms the boys and accepting the confidences of the whispering girls and making for all when the sun is high a beautiful, welcome shade. There are violets and snowdrops that are eager to play hide and seek in the school yard in the early spring days, and in some parts of the state there are wild roses to bloom in June and lend their sweetness for all the summer in the school.

“Since we can so easily make the school yard beautiful, a little oasis in the lives of ourselves and of those who are to follow us, and since it is fun to do it—going out into the woods and fields for what we want—let us resolve that next fall there shall not be a single barren school yard in all the rural districts of the state.”



GOOD APPARATUS ON PLAYGROUND FOR SMALLER PUPILS.
(Permission O. J. Kern.)



AN IDEAL PLAYGROUND, GUELPH, ONTARIO.
(Permission Prof. H. L. Hutt, Guelph, Canada.)

THE ORNAMENTATION OF SCHOOL GROUNDS.

The importance of keeping the growing child in contact with the beautiful in art and nature is so generally conceded and so fully appreciated that any discussion of its value here would be superfluous. In theory, we have acknowledged the beneficial effects of attractive surroundings at home and at school, but until the past few years we have made little effort to put that



CAMPUS OF ARCADIA HIGH SCHOOL.

About three acres in playground.

theory into practice, except at the home. Even now, we are but beginning to ornament school grounds to any considerable extent.

Louisiana has today scores of magnificent high school buildings and hundreds of attractive and up-to-date rural graded schoolhouses; some few of these high school buildings are set in naturally attractive surroundings, and many of the rural schools are situated in the midst of nature's most beautiful groves. Thus far, however, we have left nearly everything to nature, very little having been done to supplement her gifts, or to adapt the natural planting to the peculiar needs of the school. Many of our most attractive buildings stand, unadorned, out in bare,

open spaces; by far the majority of the rural buildings are surrounded by stumps, tree tops, etc., or stand in dreary, lonesome looking open spots. Not only do such surroundings fail to add to the attractiveness of the house, but, in many cases, detract much from its natural architectural beauty.

The time has come, it would seem, when we are to begin extensive and systematic plans for the ornamentation of our school grounds. We are now spending thousands of dollars annually in building for architectural effect; we can surely afford to expend the small amount of energy, practically the only thing required in our beautiful climate, necessary to assist nature in setting these buildings off to the greatest advantage. A slightly building easily loses half of its beauty unornamented or surrounded by scenes that detract from its attractiveness. Even a poor school-house may be made to appeal to the eye by careful ornamentation. Practically no expense is necessary to do this.

It is in response to this need and the conviction that the time is ripe for extensive work along this line that this pamphlet is now presented. The State is now preparing to give material assistance in this matter to all schools making application for aid or suggestions. Three acres near the State University have



THE TEACHER IS NEEDED ON THE PLAYGROUND AS MUCH
AS IN THE SCHOOLROOM.

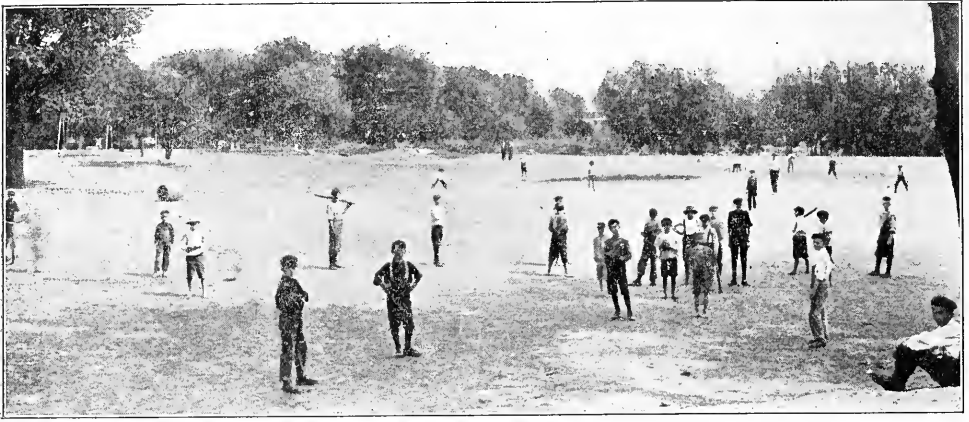
(Permission Prof. H. L. Hutt, Guelph, Canada.)



THE BACK YARD, WHERE THE LITTLE FOLKS PLAY.
(Permission O. J. Kern.)

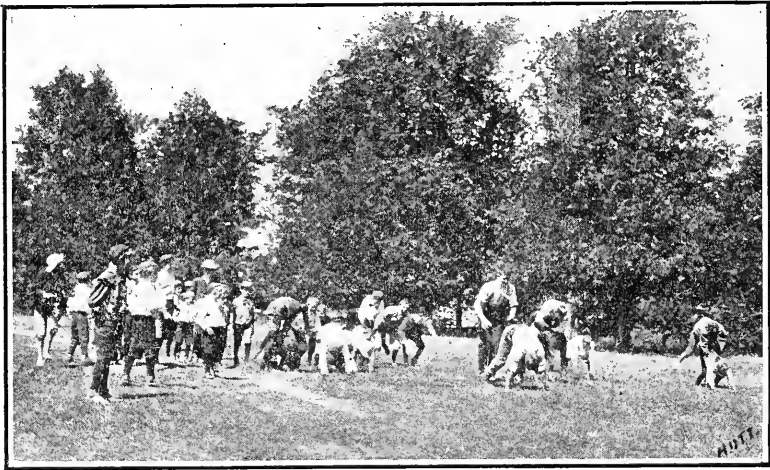
been set aside for use in propagating plants of a hardy nature which are to be distributed in limited quantities to such schools as may apply for them. This work is in charge of Professor W. W. Grisamore, a practical landscape gardener. Not only will plants be supplied, but, what is, perhaps, of more value, there will be furnished a blue print drawing of the grounds indicating a permanent planting plan for each school submitting a preliminary drawing of the grounds showing such conditions as may at present exist.

There have been many spasmodic attempts in the past at the ornamentation of our school grounds. The poor results have come largely from two causes—little knowledge of the principles of landscape gardening, and lack of a permanent planting plan to be followed faithfully from year to year. Contrary to nature's method and the principles of beauty, planting has been carried out in straight lines, usually in front



ALL THE ROOM THEY NEED.
(Permission O. J. Kern.)

of the building, thereby obstructing the view of the house and grounds. The lack of a definite, permanent planting plan has resulted in each succeeding teacher or principal ignoring the efforts of her predecessor and beginning all over again. Manifestly, the results could be nothing worth while. Now for the first time we are about to go at this business of putting into



THE WHOLE BOY PLAYS, BODY, MIND AND SPIRIT.
(Permission Prof. H. L. Hutt, Guelph, Canada.)



THE PROPOSED SITE FOR CONSOLIDATED SCHOOL IN DE SOTO PARISH—AN IDEAL LOCATION.

practice our theories of the value of the attractive in a systematic and extensive manner. A commodious and imposing school-house may be constructed in a few months, but it requires half a century for nature to grow a beautiful setting for it. And it can be done in no other way than through following her methods,



SHILOH CONSOLIDATED SCHOOL, DE SOTO PARISH.
Opportunity for ornamentation.

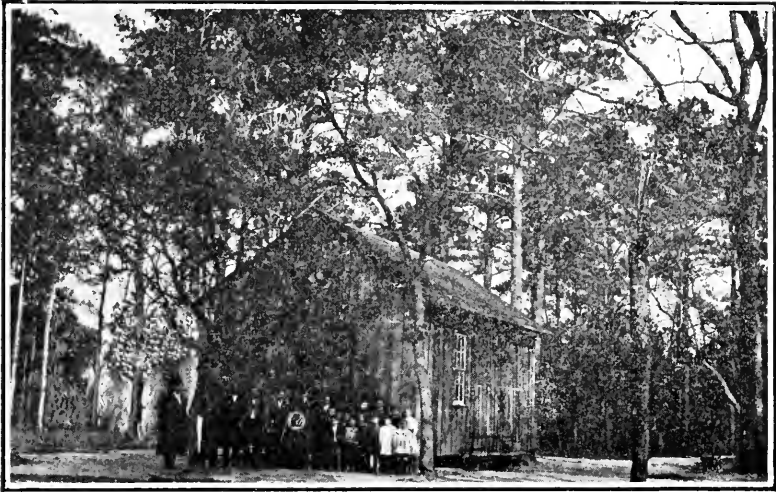


SUGARTOWN CONSOLIDATED SCHOOL, WHICH HAS TAKEN
FIRST STEPS TOWARD SCIENTIFIC ORNAMENTATION.

consciously and definitely, from year to year. We hope this small pamphlet may be of some aid in furthering the cause of ornamentation and save us of today from some of the criticism that must otherwise come in the next generation when its value will be more generally and deeply appreciated.

“It is an easy matter to picture an ideal country school—its clean-swept walk to the road, its ample playground, its wind-break of evergreens, its groups of hard- and soft-wood species, borders of shrubs and beds of bulbs for early spring and perennials for summer and fall. But to get it—to find some way to overcome the serious obstacles—is worthy the attention of statesmen and clubwomen.

“Nearly every district has made an attempt. That is one of the hard things to forget—one of the reasons so many districts fear to try again. They had a spasm of civic righteousness—an Arbor Day revival—and every patron dug a hole in the hard, dry ground, every child brought a tree—some with few roots, some carried a couple of miles with the roots exposed to sun and wind—and then they were planted and, in some cases, watered for the summer; and the days grew warm and the weeds grew high, and the next fall the two or three trees alive were not noticed when the director when over, the Friday before



TALISHEEK SCHOOL, ST. TAMMANY PARISH.
An ideal site and splendid location for a consolidated school.

school opened, with his mower; and so ended that attempt at a school yard beautiful.

"It ought to be possible to convince the patrons of every district that a single acre of land is not sufficient ground upon

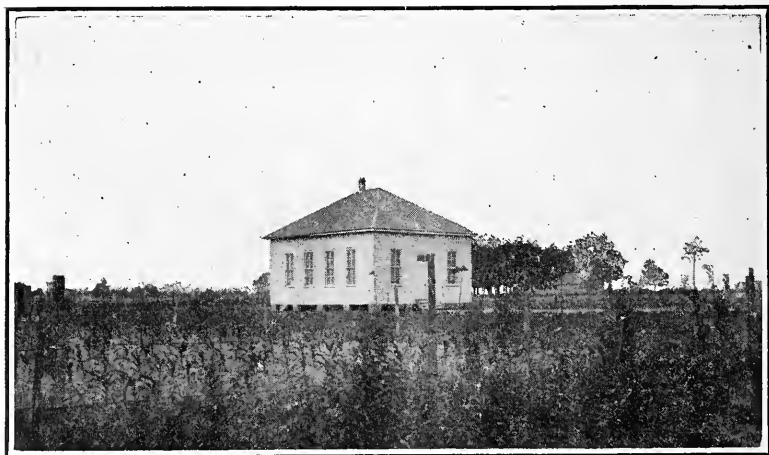


SIBLEY CONSOLIDATED SCHOOL, WEBSTER PARISH.
Ornamentation of grounds will improve its appearance 100 per cent.

which to grow big, bright, broad-minded boys and girls; that two, or three, or four acres of land, well planned as to baseball diamond, basketball court and a good, free run for dare-base and pull-away, are giving the State and the world better results than though they were devoted to corn and alfalfa. This, I believe, is the first problem of great magnitude—to get the ground—and it must be considered. Children must play. The noon hour, when they eat for five minutes and play fifty-five minutes, is all-important in a child's life.”—*Kansas School Improvement Bulletin*.

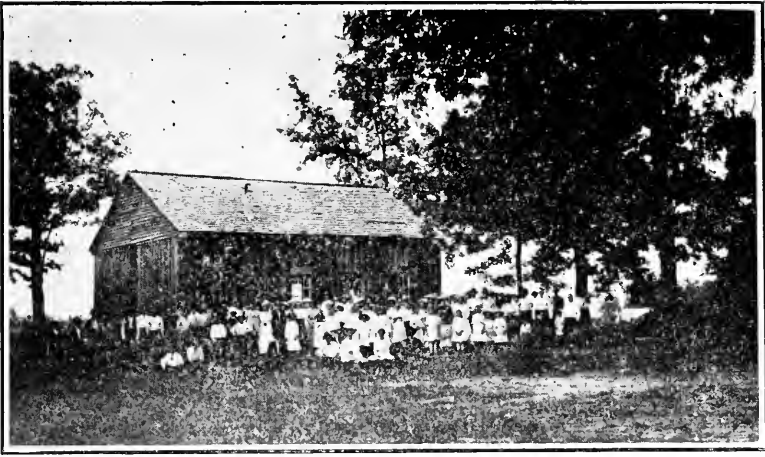
FUNDAMENTAL CONSIDERATIONS.

“The grounds should be cozy, homelike and attractive. In general, trees should be planted near the edge of the school grounds so that almost the entire space will be left for play-grounds. With a view also to avoiding the obstruction of light they should not be nearer the building than fifty or sixty feet. The grounds will consist of an open space fringed with wooded sides and should be an artistic picture and not merely a collection of trees and bushes. Trees and shrubbery present a better effect if they are not set out in straight lines as in the nursery. They should be irregularly arranged and should consist of a somewhat compact mass of trees and shrubbery of varying sizes and styles of growth.



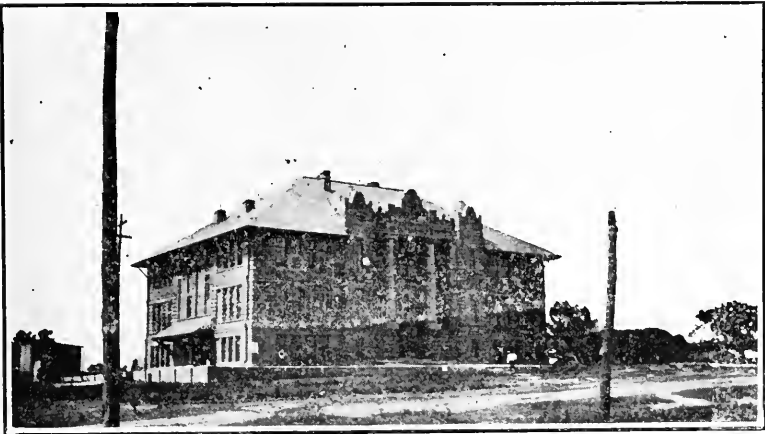
GUIDRY SCHOOL, LAFAYETTE PARISH.

It should have as attractive a setting as the residence in the background.

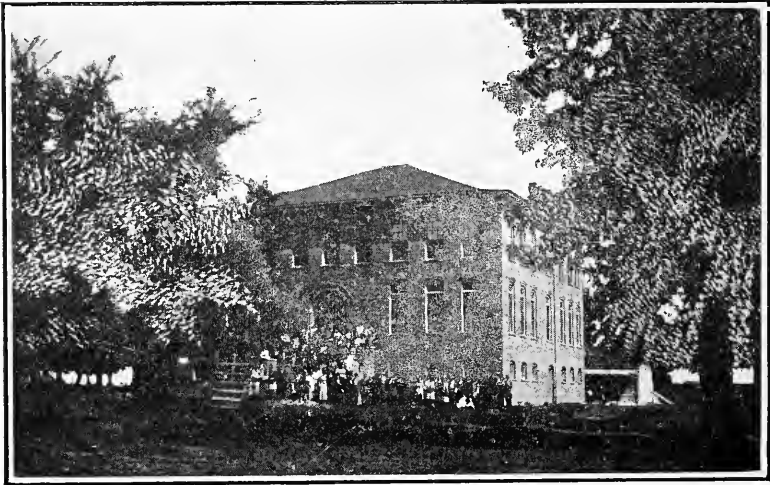


HEBRON SCHOOL, JACKSON PARISH.
A beautiful site for a consolidated school.

The portion of the school grounds in front of the schoolhouse may be reserved as a lawn with low shrubbery appropriately placed. The side next to the highway should contain but little planting. A front fence spoils valuable school ground space and almost invariably detracts from the appearance. Two walks should lead diagonally toward the two front corners, instead of a single walk. At appropriate places perennial flowers that



WINNFIELD HIGH SCHOOL.
A great opportunity for scientific ornamentation.



GRAND CANE HIGH SCHOOL—DE SOTO PARISH.

bloom early may be planted. An appropriate place in the rear can be found for goldenrod and a bunch of hollyhocks, the wooded corners may be rounded out with shrubbery, and the heavy border of trees relieved.”—*Kansas School Improvement Bulletin*.

The growing demand for teaching gardening and for outdoor experiments in elementary agriculture, for healthful and well-directed play, and for school grounds that shall be models of horticultural effect, makes ample ground space a necessity. An authority on this subject submits the following as the minimum sizes of school sites in order that the ground may give room for ornamentation as well as the school's activities:

One room school (25 to 35 pupils)	2 acres
Two room school (35 to 75 pupils),	3 acres
Three room school (75 to 115 pupils),	4 acres
Four rooms or more (115 or more pupils),	
not less than	5 acres

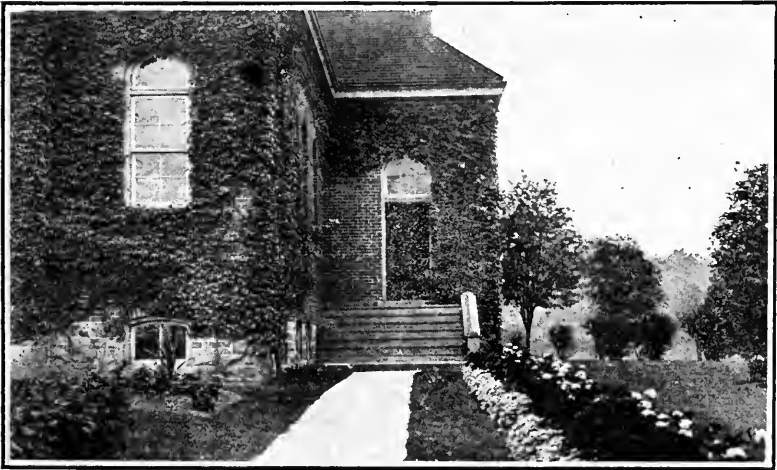
It is realized that in towns and cities, as well as in some rural communities, such extensive grounds seem impossible. In most places, however, the expense incidental to providing grounds of the size indicated is very slight in comparison to the many ad-



GOING TO SCHOOL. DO THEY FIND AS MUCH BEAUTY THERE
AS ON THE ROAD?

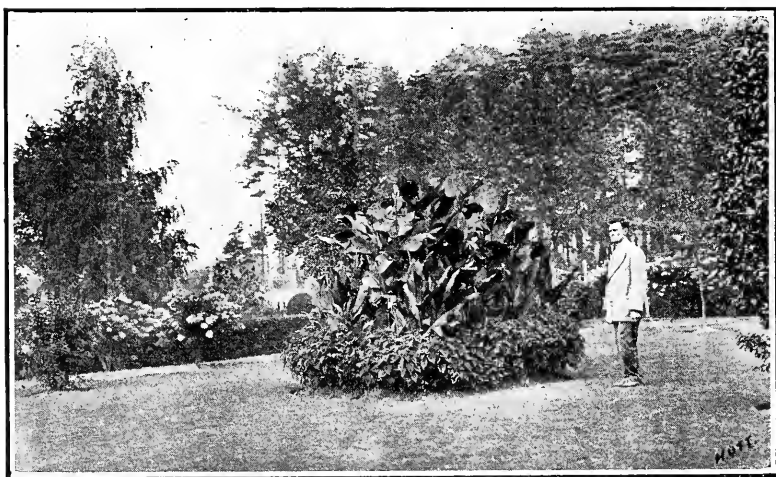
(Permission Prof. H. L. Hutt, Guelph, Canada.)

vantages thereby afforded. A little study of the tendency of the times will convince school authorities that less extensive grounds than those mentioned will be decidedly inadequate to the increasing activities of the school a few years hence. Now is the time to



LET US WORK TOWARDS HAVING ALL OUR SCHOOLS PRE-
SENT THIS ATTRACTIVE APPEARANCE.

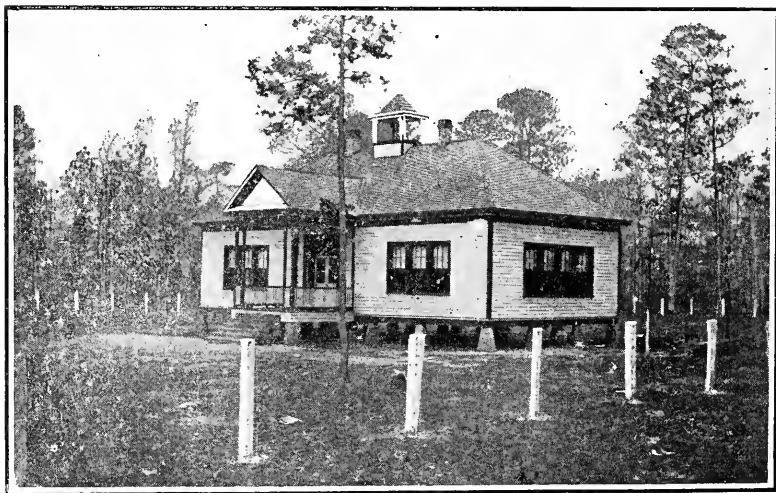
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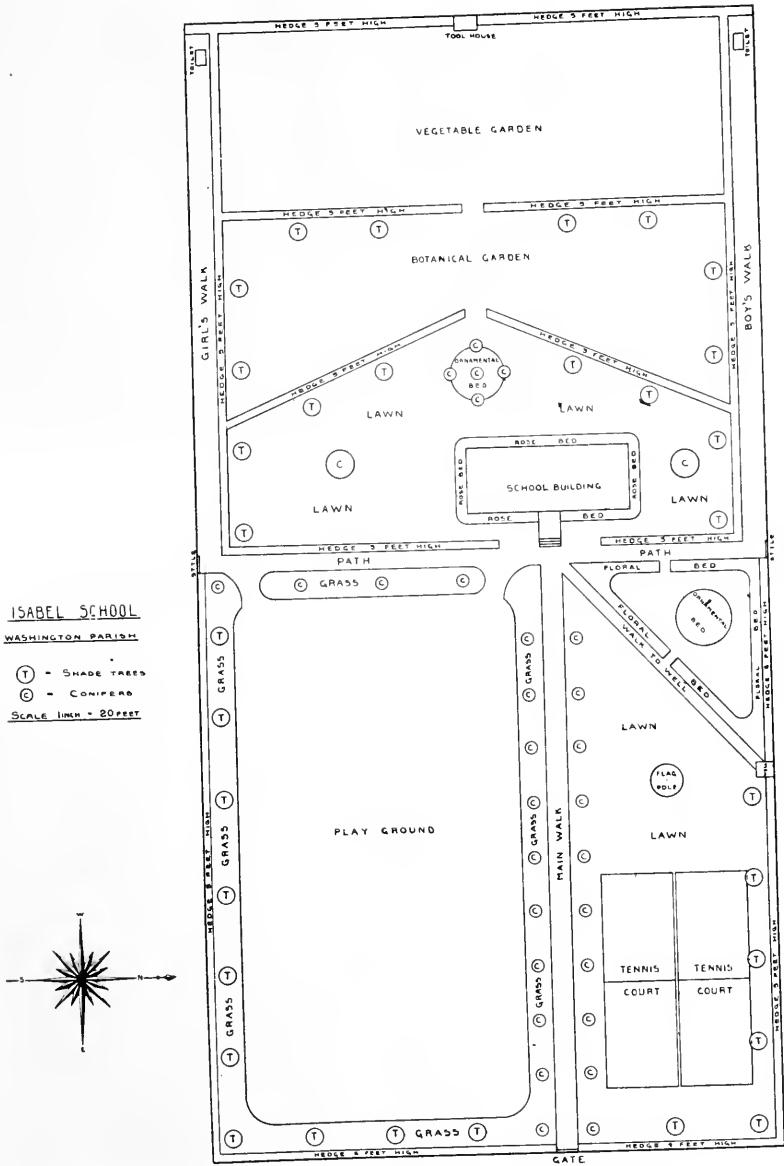
AN ORNAMENTED SCHOOL GROUND IN FAR-AWAY CANADA.
WHAT COULD WE DO IN LOUISIANA?

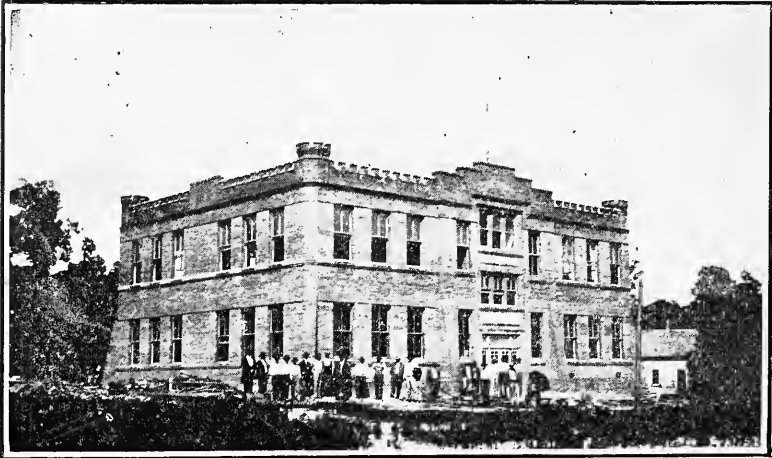
(Permission Prof. H. L. Hutt, Guelph, Canada.)

provide such sites before land values increase greatly. Fortunately, we have already begun this practice in Louisiana. In Calcasieu and a few other parishes nothing less than five acres is accepted for the site of a new building. The report of the State



ISABEL CONSOLIDATED SCHOOL, WASHINGTON PARISH,
Which is undertaking a scientific improvement of its grounds.





EROS HIGH SCHOOL, JACKSON PARISH, WHICH PROPOSES TO
BEGIN SCIENTIFIC ORNAMENTATION.

Superintendent of Education for 1910 shows that, in the forty-six parishes reporting on this item, there were 210 rural schools having sites consisting of two acres or more. Including parishes not reporting, agricultural schools, and those of towns and cities, we might conservatively estimate the number at 300, one-eighth of all the schools—surely an excellent beginning.

PLAY GROUNDS.

“It is a poor type of school nowadays that has not a good playground attached.”—Theodore Roosevelt.

In addition to the space devoted to the work activities of the school of to-day, the modern school must be provided with ample playground room. Such space should be in three divisions; for large girls, large boys, and the smaller pupils. The location of these separate grounds will, of course, depend upon the topography and permanent incumbrances of the site. When convenient, however, the grounds for the larger children should be located on opposite sides of the building, and that for the small children in front or at the rear of the house. Room for play is of fundamental importance and must take precedence over the planting of shrubs or trees for ornamental purposes. More and more do we believe in the educational value of that spontaneous activity wherein the whole child takes part. Nothing is of enough con-

sequence to take up the proper amount of space for games and romping, and any planting plan will set aside this space before even considering that for gardening, agriculture, or ornamentation.

LISTS OF PLANTS FOR SCHOOL GROUNDS.

Professor Grisamore furnishes the following invaluable list of plants adapted to planting on school grounds of this state.

The following trees, shrubs and vines are adapted to planting in all parts of Louisiana. The Live Oak, if grown in the northern part of the State, however, should be planted on slopes or bottom lands, as it requires a great deal of moisture. The little "w" placed after the names of a plant indicates that it may be procured from the woods.

EVERGREEN SHADE TREES.

Cedrus Deodara (the lofty cedar).

Gordonia Lasianthus (the Louisiana holly bay).

Hex Dahoon (Dahoon holly)w.

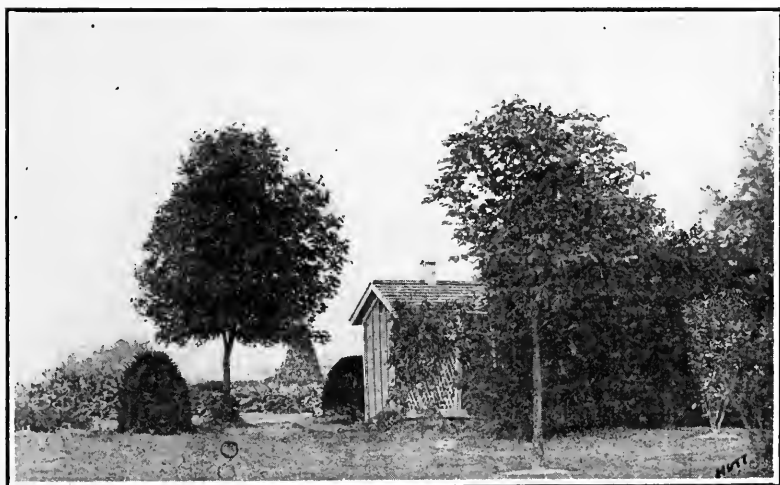
Magnolia Gaudiflora (the common magnolia of Louisiana).

Quercus Virens (the live oak)w.

DECIDUOUS SHADE TREES.

Celtis Bentharii (the huckleberry tree).

Celtis Occidentalis (the huckleberry tree)w.



AN IDEAL SETTING FOR SCHOOL OUTHOUSES.
(Permission Prof. H. L. Hutt, Guelph, Canada.)

- Celtis Orientalis* (the huckleberry tree) w.
Liquidambar styraciflua (the sweet gum tree) w.
Melia Azedarack var. *umbraculiformis* (the umbrella china tree).
Populus Deltoides (Carolina poplar).
Populus Tombody (ornamental only).
Quercus coccinea (the scarlet oak) w.
Quercus nigra aquatica (the water oak) w.
Quercus alba (the white oak) w.
Quercus Palustris (the pin oak) w.
Quercus Robur (the black oak).

All the trees above mentioned should be planted during autumn or winter.

They may be transferred from the forest during damp weather just after a good rain, the holes having previously been prepared to receive them. The best time to excavate is during dry weather in September. In excavating be sure that you dig the holes four feet square and four feet in depth. The above dimensions will be ample to accommodate all trees that may be conveniently and safely transplanted. However, if the soil that is dug from holes where trees are to be planted permanently seems poor, add two bushels of decomposed stable manure, mix thoroughly and let the soil heap stand at least 40 or 50 days; this is done to give the holes a good sunning before planting trees. During the time from excavation till trees are planted, the soil heap should be carefully guarded to prevent the rain from washing the soil back into the holes. The above instructions are for trees taken up in the forest. If possible, in digging the trees from their native homes we would advise one to take a good ball of earth with the roots and set the trees as nearly as possible in the same position and depth as they were in the forest. The most convenient and safe size of trees to handle from the forest are those from six to twelve feet in height and from one to three inches in diameter of trunks. If the trees have many branches they should be cut back two-thirds of their growth. When planting the trees, to aid rapid growth we would advise that the soil put about the roots, or the round ball of earth taken up with the roots, should be well packed to exclude all air holes. In transferring plants from the forest one should be careful to get all or as much of the tap root as possible.



CHILDREN ACCUSTOMED TO SUCH BEAUTY WILL HAVE IT AT HOME.
(Permission O. J. Kern.)

SHRUBS.

All these shrubs are usually nursery-grown and can easily be transplanted with little or no trouble. The following will be found adapted to all parts of Louisiana:

Althea (Rose of Sharon). In variety, deciduous.

Azealia (Hardy). In variety, deciduous and evergreen.

Deutzas. In variety, deciduous.

Enonymus Europæus (the Burning Bush) Dic.

Lagerstrœmia. In variety, dierd. (Crape Myrtle).

Lefustrum Amurense (Pnoet) Hedge.

Magnolia Purpurea. Deciduous.

Philadelphus (Mock Orange). In variety, deciduous.

Spiræas. In variety, deciduous.

Famarix. In variety, deciduous.
 Weigelas. In variety, deciduous.
 Xanthoceras Sorbifolia. Deciduous.
 Roses. In variety.

CULTURE

Dig the hole where shrubs are to be planted a spade and a half deep. When spading is finished drop in a liberal amount of half-decomposed stable manure. Each plant should have three-fourths of a bushel. This preparation should be made during the last week in September or the first of October, and late in November set out the shrubs. If the plants are received with a ball of earth about their roots, one need not shade, only water thoroughly. In setting plants be careful not to disturb the roots, and place the ball of earth and roots an inch and a half beneath the surface of the soil. Should the plants arrive without any earth around the roots, such plants should be shaded from the sun for five or six days at least after planting. The soil about the roots should be thoroughly packed to exclude the air. When shrubs are sent out from a nursery they are usually pruned and ready to be planted. We know of no class of plants that lend their beauty to ornamentation and landscaping as do the shrubs.

HARDY EVERGREEN CONIFERS.

Araucaria imbricata (the monkey puzzle tree).
Cryptomeria Japonica Lobbi Compacta.
Juniperus virgnuana Glauca.
Pecea Pungus Glauca Kosteri (the blue spruce of Colorado).
Thurya Orientalis Aurea naua.
Thurya Orientalis Rosenthali.
Thurya Orientalis Culture.

The above plants will flourish in any well-drained soil in altitude above ten feet.

They do not need very much humus. In preparing soil for planting, spade thoroughly, using one-third of a bushel of manure, well decomposed, to the plant, and give the same treatment as is mentioned for shrubs.

HARDY VINES AND CREEPERS.

Actundia Arguta (the silver vine).

Apebia Quinta (*Apebia* vine).

Apios Tuberosa.

Ampelopsis (*Eugemanne Virginia Creeper*).

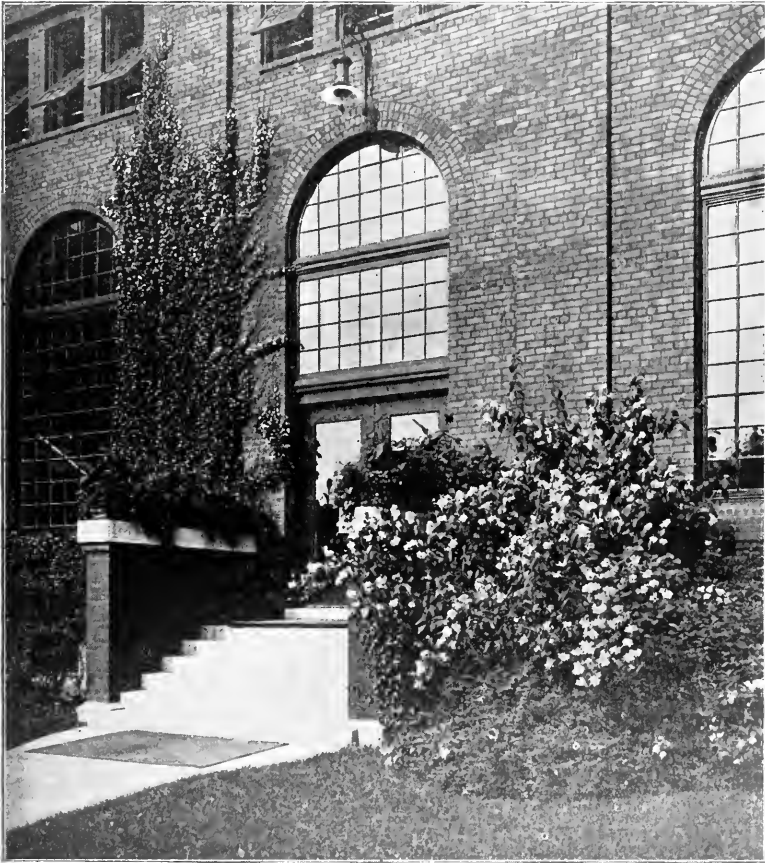
Anstolachia Sepho.

Bignonia. In variety.

Clematis. In variety (large and small flowered).

Gelsemuine simpervirens. Hardy wild yellow jessamines.

Impormcea Pandurata. In variety (moonvine).



CHILDREN LIKELY ENTER THIS SCHOOL WITH SMILING FACES.
(Permission O. J. Kern.)

Lonecera. In variety (the honeysuckle).

Hedera Helix (English ivy).

Humulus (hop vine). In variety.

Wistaria. In variety.

All the above-named vines may be cultivated the same as shrubs with the exception that they will need a support of some kind, such as arbors, trellises, etc., and their runners will have to be caught up and trained.

ORNAMENTAL GRASSES.

Cortaderia selloana (silver pampas grass).

Eulalia Japonica Zebuna (zebra grass).

Ophiopogon Japonicus (border grass).

Give the above plants a sunny position and a liberal amount of humus during the spring. Prepare soil the same as for other plants.

SPECIAL DISTRICT PLANTS.

The following plants may be grown as far north as parallel 31 and prove safe from frost:

EVERGREEN TREES.

Cinnamomum Camphora (the camphor tree).

Grivellea Rabstua (Australian silk oak).

BAMBOOS.

Bamboos (hardy). In variety.

PALMS.

Palms (hardy). In variety.

SHRUBS.

Calcanthus Floridus.

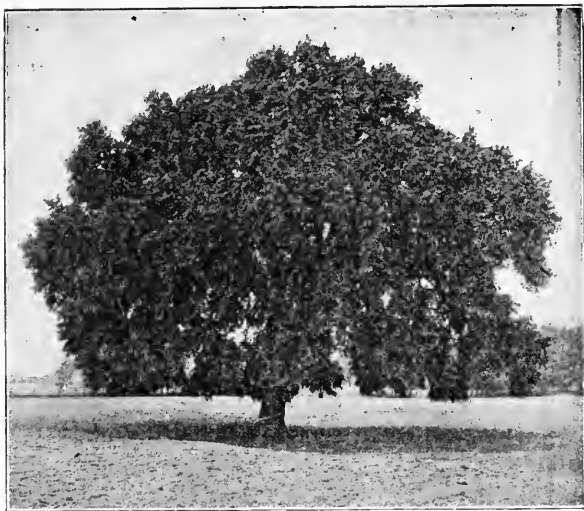
Camelia Japonica. In variety.

Gardinia Florida (the cape jessamine).

Hydranger. In variety.

Heruims (the oleander).

Pettosporum. In variety.



WHAT WOULD THIS BE WORTH ON THE SCHOOL
GROUND?

(Permission O. J. Kern.)

VINES, HERBACIOUS AND EVERGREENS.

Antigonon leptopus (the Mexican mountain rose).

Solanums. In variety.

Aristolochia elgans (Dutchman pipe vine).

Bignonia Tweediana.

Thundergia fragrans.

Trachelospermum jasminoides (the star jasmine).

Give the same culture as for general plants as mentioned above.

Some plants adapted to all parts of Louisiana north of parallel 31.

Fagus. In variety (the beech).

Hex apaca (southern holly).

Maples. In variety.

SHRUBS.

Chionanthus virginica (the white flowering ash).

Comus. In variety (the dogwood).

Pyrus japonica (Japan quince).

Most of the plants mentioned below are adapted to all parts of Louisiana. Being tender, however, most of them must be given protection of some kind during the winter.

The above precaution is meant for territory north of parallel 31, or where the thermometer drops below 15 degrees F. They may all be used as bedding plants or planted among shrubbery.

Alternanthera. In variety (border plant).

Caladiums. In variety.

Cannas. In variety.

Coleus. In variety.

Phlox (hardy). In variety.

Plumbago. In variety.

Salvia splendens.

CULTURE.

Spade the bed where bedding plants are to grow thoroughly, using a liberal amount of half-rotten manure. We would advise that this work be done during the autumn and set out all of the plants in the spring as soon as the ground is free from frost. However, one may set out the hardy phlox during early winter. Some judgment should be used in setting them out.

Botanical specimens which might be planted on the school ground for use in the study of botany in the eighth grade:

Ceratophyllum demersum (hornwort); grows in water.

Cratægus æstivalis (May haw).

Dryopteris patens (shield fern).

Delphinium (larkspur).

Gelsemium sempervirens (yellow jessamine).

Hartmannia speciosa (evening primrose).

Iris fulva (brown iris).

Iris hexagona (blue iris).

Ipomœa bona-nox (moon flower).

Lathyrus odoratus (sweet pea).

Lilium candidum (lily).

Lonicera japonica (Japanese honeysuckle).

Magnolia foetida (magnolia).

Opuntia opuntia (prickly pear).

Petunia (petunia).

Phlox (phlox).

Polystichum acrosticoides (Christmas fern).

Richardia Africana (calla lily).

Salvia splendens.

Selaginella apus (little club-moss).

Trachospermum jasminoides (Confederate jessamine).

Tropæolum majus (nasturtium).

Zebrina pendula (wandering jew).

Professor Grisamore will furnish a blue print planting plan to any principal or superintendent who will make application, submitting the information called for as follows:

Name of school Parish
 Principal Drainage (good, medium, poor)
 Slope (direction from building) Exposure
 (north, east, south or west) Nature of Soil
 Size of grounds
 Size of building Height
 Building material Height of foundation
 Is foundation laticed Is water supply suffi-
 cient for irrigation Has school colors (name them)
 Has school emblem (name it)



GROWING ON A SCHOOL GROUND IN WINNEBAGO COUNTY, ILL.

Will such plants grow in Louisiana? Yes.
 (Permission O. J. Kern.)



SUGGESTIVE PLANTING FOR OUTHOUSE SCREENING.
(Permission O. J. Kern.)

There must also be attached a sketch of grounds showing measurements, location of building, location of outbuildings, location and names of trees, shrubs, vines, etc., growing, location of any other permanent incumbrances on site, location and measurements of garden, agricultural plots, walks, drives, playgrounds, etc., together with any other information which might be of value in determining a permanent planting plan. The value of the drawing furnished will depend largely upon the accuracy and fullness of information thus submitted. All such correspondence should be addressed to Professor W. W. Grisamore, Department of University Extension, Baton Rouge, La., who will be assisted in such work by Professor V. L. Roy, of the same department.

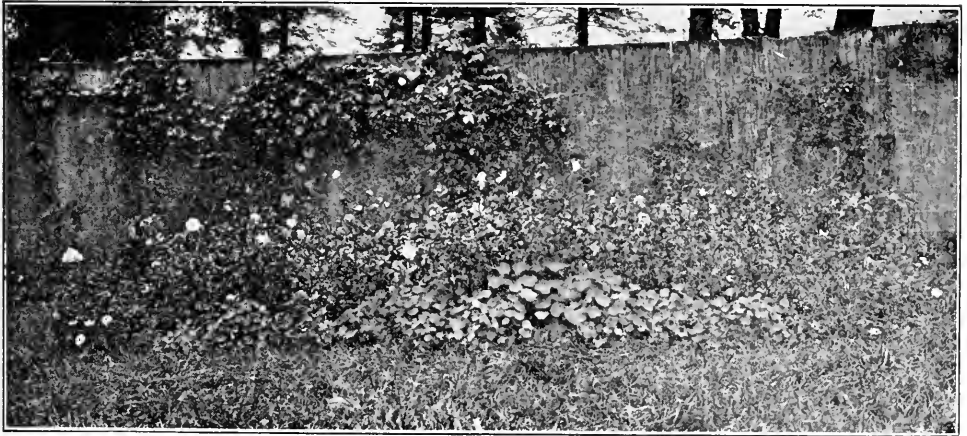
It is estimated by Mr. Grisamore that the following plants will be available at the time in the quantities mentioned in the following table:

These plants will be distributed to those applying for them in the order of the applications. The only expense to the school is that of transportation. Application should be made to Professor W. W. Grisamore, Louisiana State University.

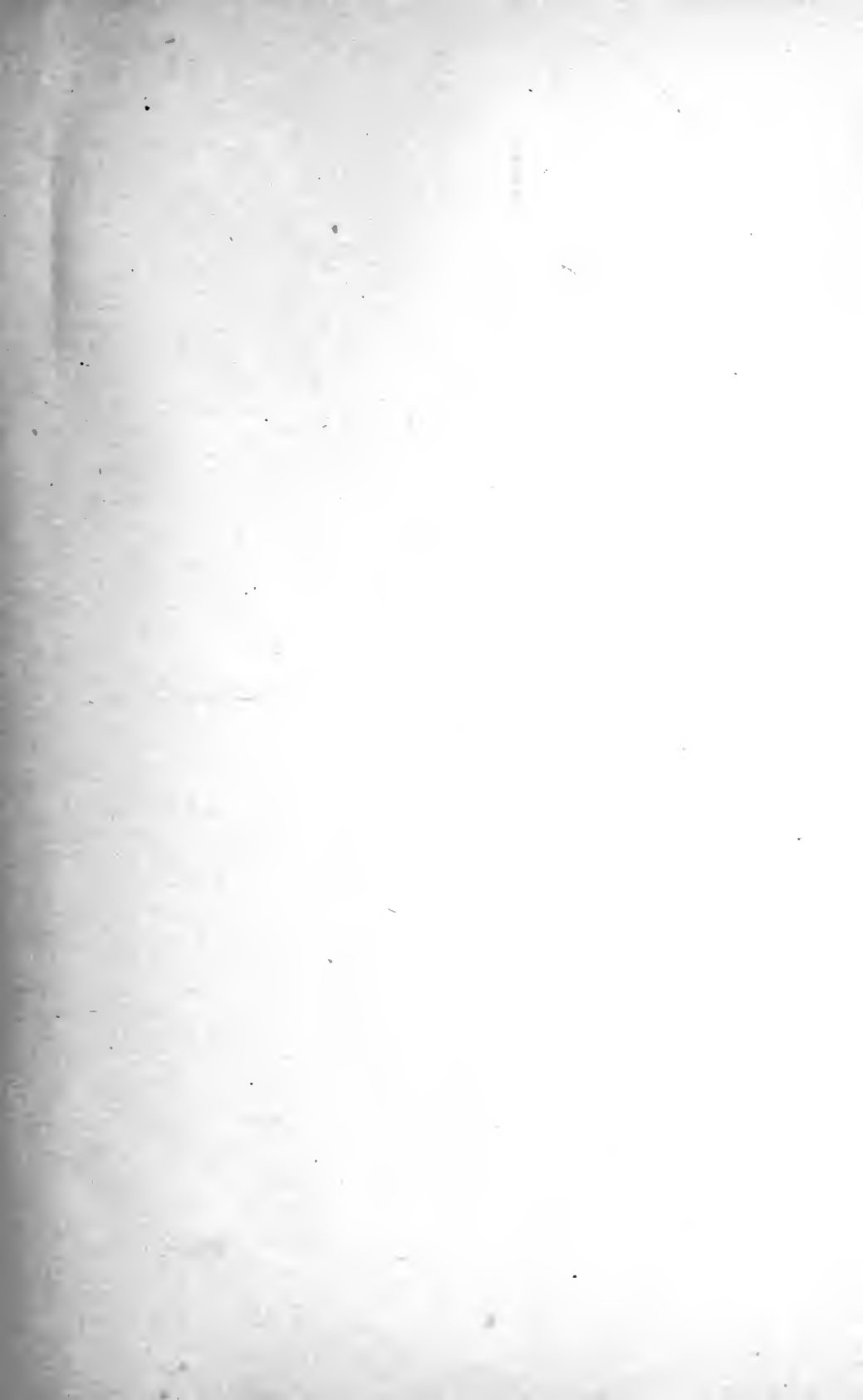
Time available—	Name of plant—	Quantity—
Fall or winter.....	Pampas grass.....	100 schools
Fall or winter.....	Border grasses.....	50 schools
Fall or winter.....	Camphor trees.....	20 schools
Late winter or spring..	Vines for arches, etc...	75 schools
Late spring.....	Palms	very few

NOTE.—The camphor trees will be supplied to central and south Louisiana schools only. The palms will be distributed among the southern tier of parishes only.

The quantity of plants available will increase rapidly from year to year, but the variety will not be greatly increased. Roses and a few other plants will likely be added another year. The object is to supply such plants as might not easily be obtained in local communities. Where the plants suggested in the permanent planting plans cannot be secured locally, they may always be had in any quantity from the many reputable florists and nurserymen of the South. Such plants as are sent out from the University will be furnished and packed free of charge, the only expense to the school being that of transportation.



SUGGESTIONS FOR IMPROVING THE APPEARANCE OF BACK FENCES.
(Permission O. J. Kern.)



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